

A New Gypsophilic Sophora (Leguminosae) from  
Northcentral Mexico and Adjacent Texas

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The exploration of newly found gypseous outcrops in northcentral Mexico continues to yield a number of highly restricted species from a number of families. Gypsophiles in the Leguminosae are relatively rare, most of the Mexican species belonging to Astragalus or Dalea. Rudd (1968) has recently treated the Mexican species of Sophora, but unfortunately she did not have material of the previously uncollected species described here.

Sophora gypsophila sp. nov. Frutex 6--20 dm. altus. Stipulae deltoideae acutae sericeae 1--2 mm. longae caducae. Axis folii (5--)6--10 cm. longus dense pubescens pilis argenteis adpressis. Foliola laterali (8--)10--12 alterna vel raro opposita coriacea saepe ovalia (8--)10--16 mm. longa, 4--10 mm. lata supra viridia ad maturitatem glabra subtus argenteo-pubescentia. Foliolum terminale majus saepe obovoideum retusumque. Basis pedicellae bracteis 3--6 mm. longis. Bracteolae sub calyce ca. 1 mm. longae. Flores ca. 25 mm. longi. Calyx ca. 10 mm. longus pilis adpressis sinibus ca. 1--2 mm. longis. Petala purpurea.

Vexillum alis carinatae longiore. Fructus coriaceus primum argenteo-pubescentem demum glabratus stramineus aliquantum compressus saepe torulosus ca. 1 mm. latus 5--14 cm. longus, 3--10-spermus. Semina ovoidea 5--6 mm. longa.

Shrub 6--20 dm. tall; stipules deltoid, acute, sericeous, 1--2 mm long, caducous; leaves (9)11-13 foliolate, the rachis (5)6-10 cm. long, densely pubescent with silvery, appressed hairs; leaflets alternate or less often appearing opposite, coriaceous, the lateral blades mostly oval, 4-10 mm. wide, (8)10-16 mm. long, the terminal blade somewhat larger and often obovoid and retuse at the apex, the upper surface greenish and glabrate at maturity, the lower surface, silvery pubescent; bracts at base of pedicels 3-6 mm. long; bracteoles below the calyx about 1 mm. long; flowers ca 25 mm. long; calyx appressed pubescent, ca 10 mm. long, the sinuses ca 1-2 mm.; petals purple, the standard somewhat longer than the wings and keel; fruit coriaceous, silvery pubescent when young but glabrate and straw-colored at maturity, somewhat compressed and often torulose, ca. 1 cm. wide, 5-14 cm. long, 3-seeded; seeds quadrangular, 5-6 mm. long, 4-5 mm. wide, 3-4 mm. thick.

HOLOTYPE (TEX): MEXICO. Chihuahua: locally common on gypsum flats along highway 16, 8.8 miles N of the railroad crossing (ca. 20 miles S of Coyame), 7 Apr. 1971, A. M. Powell, B. L. Turner & R. E. Magill 2072. Isotypes (MEXU, MICH, US).

The species belongs to the section Calia (Berlandier) Rudd and is apparently most closely related to Sophora arizonica Wats., a species from southeastern Arizona, from which it differs in having more numerous, smaller leaflets with a dense, silvery pubescence beneath. They both possess

large flowers (ca. 25 mm. long) and their inflorescence and floral structure are similar.

In Rudd's (1968) treatment of the Mexican Sophoras, S. gypsophila would key to S. purpusii Brandeg., a species collected near Parras, Coahuila and near San Lucas, Zacatecas. It differs from the latter, however, in possessing much larger and fewer leaflets and larger flowers. Since S. purpusii is known from only three collections at two localities it is probable that it too is a gypsophile, since gypsum and anhydrite outcrops occur in the near vicinity of the sites mentioned.

In going over an early version of this manuscript Dr. Rudd called to our attention the similarity of S. gypsophila to certain unnamed collections from the Guadalupe Mountains in Texas which she thought might be related to S. arizonica. The junior author found two specimens in the Sul Ross Herbarium which indeed appear to belong to the species described here, but because of their geographical isolation and difference in fruit and seed characters we here treat this population as a new variety as follows:

Sophora gypsophila var. guadalupensis Turner & Powell, var. nov.

A varietate typica leguminibus latioribus 10-14 mm. latis, seminibus majoribus 7-10 mm. longis 6-7 mm. latis, foliolis ovatoribus paucioribus minus conspicue glabratis differt.

Differing from the species in possessing wider pods (10-14 mm. wide) and larger seeds (7-10 mm. long, 6-7 mm. wide); the leaflets are also somewhat more ovate, fewer and not so conspicuously glabrate at maturity.

HOLOTYPE (SRSC): TEXAS. Culberson Co.: "Rare shrub except locally on northwest slopes of the Guadalupe Mountains on J. C. Hunter Ranch near Dog Canyon" alt. 5000 feet, 26 Sept. 1955, Pierce Uzzell s.n. one additional sterile specimen was examined (SRSC): "low spreading shrub usually less than 3 ft. high; limestone soil of west Dog Canyon", 5 Sept. 1954, B. H. Warnock 11989.

It should be noted that the var. guadalupensis probably also occurs on gypsiferous soils since such outcrops abound in the area surrounding the type locality. We have not seen flowering material of the variety but remains of the calyx at the base of the fruit suggest that the two varieties are indeed quite closely related.

Sophora gypsophila should make a handsome ornamental for gardens of the Southwestern United States. Its tight branching habit (in the manner of Sophora secundiflora, Texas Mountain Laurel), silver leathery foliage and purple flowers would make it especially appealing as a hedge or border plant.

Finally, it should be noted that the authors are not certain that the var. gypsophila is confined to gypsum outcrops in the region concerned. It might also occur in the more elevated mountainous habitats nearby, merely finding the much lower gypseous outcrops especially suitable for growth. It was not observed elsewhere along the road, however, and appeared to favor the more exposed barren gypseous ridges at the type locality itself.

We are grateful to Dr. Velva Rudd of the Smithsonian Institution for helpful suggestions regarding the relationships of the taxon and to Dr. M. C. Johnston for providing the Latin description. Field work was supported in part by N. S. F. grant GB 5448X.

## Literature Cited

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NAME CHANGE FOR ELEOCHARIS PYGMAEA (SUSS.) L. T. EITEN.

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Dr. C. V. Morton of the Smithsonian Institution has kindly brought to my attention the fact that the name "Eleocharis pygmaea" was previously validly published by Torrey in 1836. This necessitates a new name for the different species, Chamaegyne pygmaea Süss., when transferred to Eleocharis.

Eleocharis chamaegyne L. T. Eiten, nom. nov.

Based on Chamaegyne pygmaea Süss., Bot. Jahr. 73: 113 (1943).

Syn.: Eleocharis pygmaea (Süss.) L. T. Eiten, Phytologia 20: 273-274 (1970), non Torrey, Ann. Lyceum New York 2: 313 (1836).